

## NEW DESCRIPTIONS

### A NEW SPECIES OF *AGIOMMATUS* CRAWFORD (HYMENOPTERA: PTEROMALIDAE) — AN EGG PARASITE OF A CUTWORM ON MULBERRY IN BANGALORE (KARNATAKA)<sup>1</sup>

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(With five text-figures)

A new species of Pteromalidae, namely *Agiommatus geethae* parasitising eggs of *Spodoptera litura* (Fab.) on mulberry is described from Bangalore (Karnataka). A key to the species of *Agiommatus* is also provided.

#### INTRODUCTION

In this paper we have described a new species of *Agiommatus* Crawford (Hymenoptera: Pteromalidae) parasitising the eggs of *Spodoptera litura* (Fab.). Besides this new species from Bangalore, only three species of the genus, namely *A. sumatraensis* Crawford, 1911 from Sumatra, *A. attaci* Ferriere, 1930 from Malay peninsula and *A. paria* (Motschulsky) 1863 from Sri Lanka and India are so far known from South Asia.

#### *Agiommatus geethae* sp. nov. (Figs. 1-5)

**FEMALE:** Length 1.9 mm. Body dark metallic blue, almost black on lateral part of head and thorax; gaster including petiole brownish black, pale ventrally; eyes dark cupreous; ocelli brown. Antennae with scape, pedicel and anelli pale yellow, remainder pale brownish yellow. Legs yellow with fore and hind coxae almost brown; mid coxae pale brownish yellow; tips of tarsi brown.

**Head** (Figs. 1, 3 & 4): Uniformly and finely reticulate, with sparse white pubescence. In dorsal view head width 1.7 x length and in front view width 1.3 x height; temple length 0.4 x eye length; POL 3 x OOL; ocell-ocular area slightly depressed; clypeus angularly projecting with anterior edge deeply emarginate; malar space length 0.5 x eye length; malar grooves distinct; eye length 1.4 x width in profile. Antennae (Fig. 2) inserted below middle of face; scape length 0.6 x eye length; third anellus slightly longer than other two; club longer than two

preceding segments combined.

**Thorax** (Fig. 1): Moderately reticulate, covered with sparse white pubescence; pronotal edge rounded without carina. Mesoscutum with notauli incomplete, fading towards the posterior end, width 2 x length, lateral lobe with a distinct fovea in lateral corner at tegula and another at outer corner of axilla. Scutellum with reticulation finer on frenal area, almost as long as wide. Propodeum width 2.3 x median length; median carina and costula distinct; nuchal area almost shiny; plicae distinct; spiracles elongatedly oval; callus with few scattered hairs. Prepectus very small, almost smooth. Mesopleuron slightly elevated making the lateral panel of pronotum little low, with the anterior face separated by a fine epicnemial carina. Mesepisternum moderately reticulate. Upper mesepimeron smooth and shiny, lower part separated by a deep pit. Metapleuron very finely reticulate. Fore wing (Fig. 5) length 2 x width, basal part almost bare with few setae on basal vein; mv slightly thickened uniformly. Relative lengths of smv, mv, pmv, and stv as 14, 10, 6.5 and 4. All coxae smooth. Relative lengths of hind coxa, femur, tibia and tarsus as 5.5, 10.5, 12.5, and 10.

**Gaster** (Fig. 1): Elongatedly ovate; petiole length 2 x width, little shorter than hindcoxa; gaster length 2.8 x width in dorsal view; T1 angulate in the middle; T2 deeply emarginate in the middle at posterior end; T3 largest; ovipositor sheaths not protruding out.

**MALE:** Not known.

**Host:** Eggs of *Spodoptera litura* (Fab.) on mulberry.

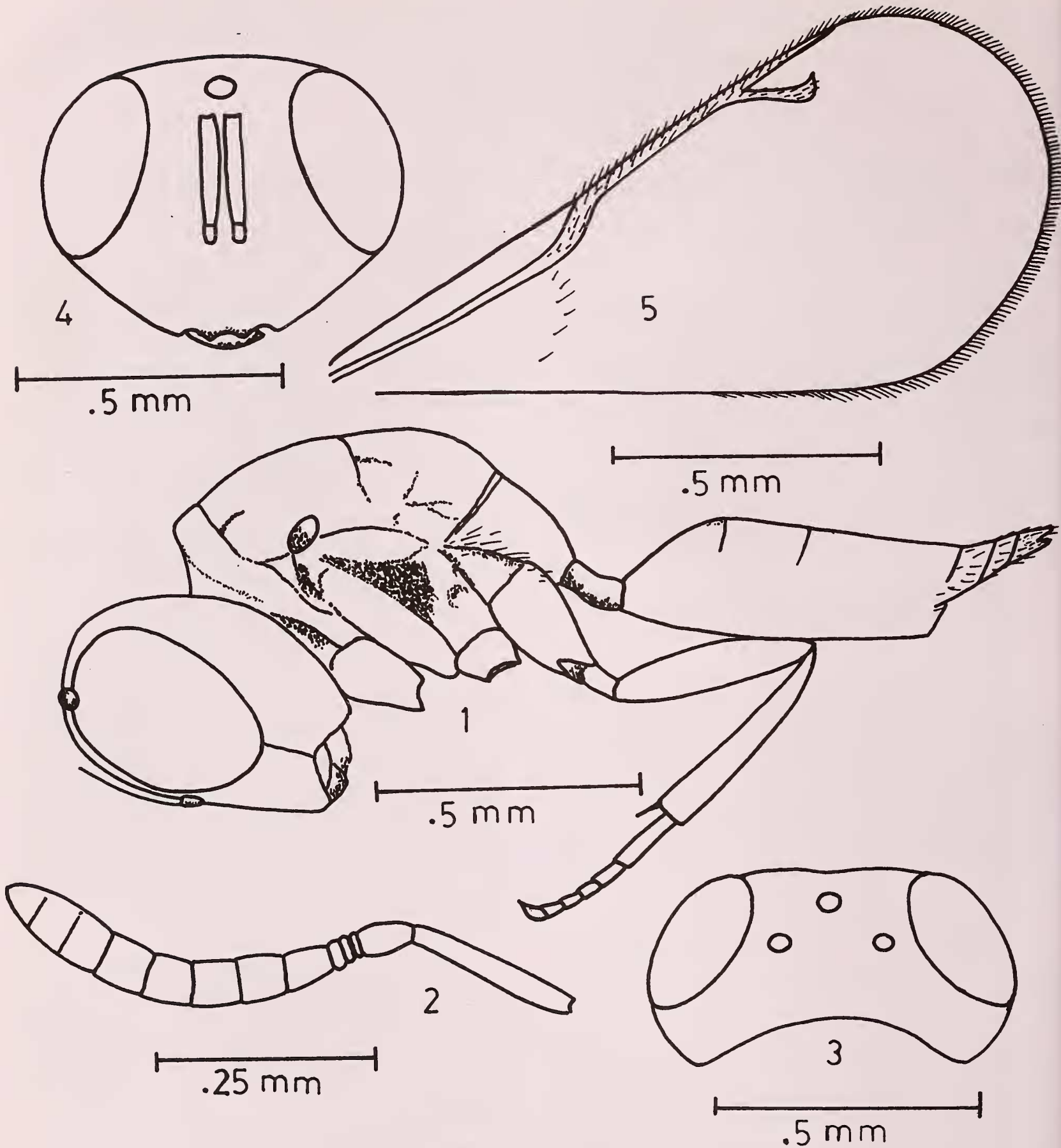
**Holotype:** FEMALE: INDIA; Karnataka: Bangalore, 30.ix.1994, Coll. Geetha bai, ex. cutworm eggs on mulberry.

**Paratypes:** 10 Females, data same as that of holotype. The type specimens are kept in the collections of Zoological Survey of India, Western

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Figs. 1-5. *Agiommatius geethae* sp. nov. Female: 1. Body in profile; 2. Antenna; 3. Head in dorsal view; 4. Head in front view; 5. Forewing.

Ghats Field Research Station, Calicut but eventually will be deposited in the National Zoological Collections of Zoological Survey of India, Calcutta.

**Etymology:** The species is named after Dr. (Mrs) Geetha Bai, Scientific Officer, Karnataka State Sericulture Development Institute, Bangalore who

was kind enough to send the specimens for our studies.

**Remarks:** The species closely resembles *A. paria* (Motschulsky) but differs from it as follows: (1) gaster without yellow transverse stripes between T1 & T2 and T3 & T4, ventral side not yellow; legs with forecoxae almost entirely and basal two third of hind coxae brown [in *paria*, gaster with yellow transverse stripes between T1 & T2 and T3 & T4, ventral side almost entirely yellow; base of fore and hind coxae greenish]; (2) antennae with pedicel distinctly longer than wide (2 x), club 1.4 x greater than two preceding segments combined [in *paria*, antennae with club as long as two preceding segments combined, pedicel a little longer than wide]; (3) mesoscutum only 2 x as wide as long with parapsidal furrows indicated clearly up to an area just above posterior margin [in *paria*, mesoscutum more than twice as wide as long with parapsidal furrows only anteriorly weakly impressed]; (4) length varies between 1.8-1.9 mm [in *paria*, length between 2.3-2.5 mm].

KEY TO THE SPECIES OF *Agiommatius* CRAWFORD  
MODIFIED FROM FERRIERE (1931) AND MANI (1989)

1. Anterior coxae with a distinct spine in front; legs including coxae entirely whitish yellow; size 2.25 mm. Host: eggs of *Erionota thrax* (L.) Sumatra ..... *sumatraensis* Crawford
- Anterior coxae without spine in front; legs with coxae not entirely whitish yellow; size 1.8-3.5 mm ..... 2
2. Antenna (fig. 2) with club 1.4 x as long as two preceding segments combined; gaster without yellow transverse

stripes; parapsidal furrows indicated clearly up to an area just above posterior margin of mesoscutum; forecoxae almost entirely and two-third portion of hindcoxae brown. Size 1.8-1.9 mm; Host: eggs of *Spodoptera litura* (Fab.). India: Karnataka ..... *geethae* sp. nov.

- Antennae with club as long as two preceding segments combined; gaster with two yellow transverse stripes; mesoscutum with parapsidal furrows only anteriorly impressed or reaching up to the middle; base of anterior and posterior coxae greenish. Size 2.3-3.5 mm ..... 3
3. Antennae with F1 twice as long as wide, the succeeding segments gradually shorter but longer than wide; mesoscutum with parapsidal furrows weak and reaching up to the middle; legs whitish, anterior and posterior coxae completely green. Size 3-3.5 mm. Host: eggs of *Attacus atlas* L. Malay peninsula (Kuala Lumpur, Java) ..... *attaci* Ferriere
- Antennae with F1 a little longer than wide, others shorter, 4th and 5th quadrate; mesoscutum with parapsidal furrows only anteriorly weakly impressed; legs more yellowish, only the base of anterior and posterior coxae green. Size 2.3-2.5 mm. Host: eggs of *Acherontia styx* Westwood. Sri Lanka, India ..... *paria* (Motschulsky)

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REFERENCES

- CRAWFORD, J.C. (1911): Descriptions of new Hymenoptera. No. 3 *Proc. U.S. nat. Mus.* 41: 267-282.
- FERRIERE, C. (1930): Asiatic Chalcidoidea. *Bull. Ent. Res.* 21: 353-360.
- FERRIERE, C. (1931): New Chalcidoid egg-parasites from South Asia. *Bull. Ent. Res.* 279-295.
- MANI, M.S. (1989): The fauna of India and the adjacent countries. Chalcidoidea (Hymenoptera). Part I & II. *Zool. Sur. India.* 1-1067.
- MOTSCHULSKY, V.DE. (1863): Essai d'un catalogue des Insectes de l'île Ceylan. *Bull. Soc. Imp. Nat. Moscou* 36, 2: 1-153.